

REMARKS/ARGUMENTS

Reconsideration and withdrawal of the rejections set forth in the Office Action is respectfully requested in view of the present amendment. Applicant has thoroughly reviewed the outstanding Office Action including the Examiner's remarks and the reference cited therein. The following remarks are believed to be fully responsive to the Office Action and render all claims at issue patentably distinguishable over the cited references. In view of the above amendments and the remarks set forth below, Applicant respectfully requests reconsideration.

Please note that a Request for Continued Examination (RCE) accompanies this Response.

Claim Rejections under 35 U.S.C. § 103

Claims 30, 31 and 34-41 have been rejected under 35 U.S.C. 103(a) as being obvious in view of Gengel (US 6,417,025).

It is respectfully submitted that the present invention as set forth in amended claim 30 is distinguishable from Gengel. First, claim 30 now recites an adhesion material that is interposed between the bottom surface of the die and the base. As disclosed in the specification (see paragraph [0037]) the provision of an adhesion material between the bottom surface of the die and the base eliminates the problem of stress that results from a temperature difference between the die and the base. In a dependent claim, the adhesion material is defined to include thermally conductive material.

In contrast to the claimed invention, Gengel's die is merely placed on material 406 (see Fig. 4B-4D). Thus, gaps or pockets of gaps may be potentially formed between the die and the base, thereby creating potential stress and reducing reliability.

As for independent claims 51 and 55, apart from the distinction noted above with respect to the presence of an adhesion material, these claims are further distinguishable from Gengel on the basis of the claimed "buffer layer." The buffer layer functions as another material to reduce stress, caused by, for example temperature. The buffer layer can be silicon rubber, epoxy or BCB.

In contrast to the claimed invention, in Gengel, the material adjacent to the die and on the base is oxide, polyethersulfone, polysulfone. The oxide is a hard material - not a buffer material. It lacks the ability to release thermal stress. Stress, especially thermal stress, is unlikely to be reduced by the use of an oxide material. Therefore, the claimed invention is neither anticipated nor

rendered obvious by the prior art. Furthermore, the claimed invention has unexpected results over the prior art. The prior art fails to teach features of the claimed invention and it cannot achieve the function of the claimed "buffer layer."

The Applicant's present claims also include claims reciting that the contact layer includes Ti and Cu (Ti/Cu), and that the conductive lines include Cu, Ni and Au (Cu/Ni/Au). The contact layer may prevent the conductive line from contacting with the die pad directly to eliminate the reliability issue.

The prior art fails to disclose the claimed buffer layer and its material to release the thermal stress during thermal cycle. Gengel also does not disclose adhesion.

In conclusion, Gengel fails to reach such significant features of the claimed invention. Furthermore, Gengel does not disclose, teach or motivate the claimed features of the above-mentioned "buffer layer" and the material for the contact and conductive layer.

Since the remaining claims depend from claims 30, 45 and 49, it is submitted that they are patentable upon the patentability of independent claims 30, 51 and 55.

It is respectfully submitted that the foregoing remarks traverse the rejections under 35 U.S.C. 103. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. 103, as set forth in the Office Action, are respectfully requested.

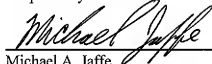
Conclusion

In view of the foregoing comments, it is respectfully submitted that the present application is now in proper condition for allowance. If the Examiner believes there are any further matters that need to be discussed in order to expedite the prosecution of the present application, the Examiner is invited to contact the undersigned.

If there are any fees necessitated by the foregoing communication, please charge such fees to our Deposit Account No. 50-0537, referencing our Docket No. HK9225US.

Date: August 7, 2007

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Michael Jaffe", is written over a horizontal line.

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